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ABSTRACT

One of a series of publications to assist Australian secondary school teachers in the area of social studies skill development, this booklet provides an introduction to basic social studies skills and their implications for classroom teaching. Following an introduction, part 1 examines current curriculum trends in Australia. Included in the discussion are the need for curriculum balance, the nature of core curriculum, and changes in teaching strategies, resources, and methods. Part 2 defines the educational content of social sciences, as well as its aims, skills, attitudes, and values. Part 3 focuses on the place and function of skill development in social science education. The skills of inquiry, communication, and social participation are discussed. Classroom strategies for developing student skills are outlined in part 4. Part 5 provides an outline of social science skills by category. Part 6 contains an instrument for planning a social science program. The final part is a case study of a model skills program. A bibliography and list of resources conclude the booklet. (LP)

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Teaching Social Science Skills

SOCIAL SCIENCE SKILLS BOOK 1

Peter Maccoll
Paul Fennell



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Foreword

Although the nature of social science courses and social science teaching in Australia has changed significantly over the past decade, much emphasis on the teaching of factual information remains. This has generally been to the detriment of the achievement of other social science aims and objectives. More recently, however, there has emerged a growing concern for the achievement of these other aims such as the development of skills, and the growth of positive attitudes and values.

The National Committee on Social Science Teaching (NCSST) recognised this need several years ago, and, continuing the work of this committee, the Curriculum Development Centre is publishing a series of booklets to assist teachers in the area of skill development. The booklets are practical and provide background to specific skill areas, guidelines for programs to develop such skills, and a wide range of student activities which can be readily incorporated into existing programs.

Many people have contributed to the development and publication of this series over the years, particularly during the period when the NCSST sub-committee was working on the form and scope of the final publication. The authors of each of the booklets in the series have made a significant contribution. However, no one has contributed more to the successful culmination of a grand idea than Peter Maccoll, the general editor of the series, and the co-author of this booklet. Each title in the series reflects the time, thought and energy he has invested in the project, as does the overall integrated form of the series.

The titles in the series are as follows:

- 1 **Teaching Social Science Skills** provides teachers with a broad introduction to the area of skills development and the implications for classroom teaching.
- 2 **Finding the Facts** is designed to provide students with skills relating to data collection through the use of the library, media, and the local community.
- 3 **Social Survey** shows students how to use survey techniques and explains their contribution to gathering data in the school and community.
- 4 **Presenting Information** outlines to students different methods for getting the message to the audience.
- 5 **Assessment and Evaluation** provides teachers with a simple introduction to assessment and evaluation in the social sciences.
- 6 **Working in Groups** provides teachers with guidelines for effective organisation of student groups in the classroom.

We believe that these materials have a much wider learning and teaching application than the series title nominates. Indeed, it will be surprising if the booklets do not become an essential resource in teacher development activities.

Their appearance is timely and they will, we are sure, be well received.

DAVID FRANCIS
Director

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Introduction

This series of booklets 'Social Science Skills' is the result of a developmental process begun in 1975 under the auspices of the National Committee on Social Science Teaching. Under the leadership of Professor W.F. Connell, the NCSST commissioned a survey of the literature concerned with the teaching of social science skills. Peter Hill of Murdoch University conducted this research, and the Curriculum Development Centre published his report, 'The Teaching of Skills in the Social Sciences: A Critical Survey of the Literature', for the NCSST in 1977. This comprehensive and analytical report has made a significant contribution to social science teaching in Australia. It has also provided the conceptual backdrop against which the 'Social Science Skills' series has been developed.

The concept for a series of booklets, each addressing a particular aspect of social science skill development, arose out of the Hill survey, and was developed further by an active consultative process involving State Education Departments and the academic sphere. NCSST project officers, Carolyn Hoban and Catharina Koopman provided the necessary liaison among the authors of the booklets, and among the members of the 'skills project' steering committee, while important contributions were made by Ross Cleaves, Kevin Piper, and John McArthur.

The form of the 'skills project' was to have individual or small teams write a booklet each, the whole series to be edited by Rob Cleaves.

When the Curriculum Development Centre absorbed the functions of the NCSST, the project continued in this form. Finally, despite a number of changes in the authorship of the individual booklets, Peter Maccoll, who replaced Ross Cleaves as general editor, has managed to weld the individual booklets into the 'Social Science Skills' series.

The series is intended to provide a variety of **starting points** for teachers and students. Some of the booklets are written for teachers: Teaching Social Science Skills; Assessment and Evaluation; Working in Groups. The others are for students: Finding the Facts; Social Survey; Presenting Information.

No book or series of books can hope to provide a comprehensive treatment of social science skill development. Neither can any one approach to skill development be regarded as being necessarily superior in all respects to another. This series does present, however, selected examples of different approaches to skill development. This series aims at being representative, at being understandable, and at being a useful, practical beginning to the growth of a deeper understanding of how social science skills are learned and taught.

.... we need pupils who are active, who learn early to find out by themselves, partly by their own spontaneous activity and partly through material we set up for them, who learn early to tell what is verifiable and what is simply the first idea to come to them.'

Jean Piaget

The Nature of Current Curriculum Trends

It is not too far into the past that teaching in Australian schools was dominated by the desire for students to gain, through traditional 'chalk, talk and textbook' approaches and almost solely for examination purposes, mastery of a wide range of factual information. More often than not this knowledge was derived from the academic disciplines, and was prescribed by tertiary institutions. For the student this academic knowledge was 'simplified' and presented in set textbooks. In addition, such texts were commonly of overseas origin and contained little reference to the student's home country, let alone his or her state, region or town.

In such circumstances, the attitudes of students were generally attuned to 'conquering' the mountain of facts. What skills that were acquired were mainly aimed at the reproduction of selected facts to answer specific examination questions.

To some readers, this may paint too gloomy a picture of past schooling, to others, it may be still very familiar.

Thankfully, the focus of education is changing. Changes have taken place and are continuing in the curriculum of schools, in the methods of teaching, and also in the ways in which student performance is being measured, assessed and evaluated. These changes have been documented and analysed in detail elsewhere. It is relevant however, to identify some of those trends which are characteristic of current thought and practice in Australian schooling.



A Concern for 'Balance' in the Curriculum

This concern is reflected in two ways. First, curriculum documents and syllabuses are now much more comprehensive in their statement of intent. Whereas in the past, aims and objectives (if stated) related mainly to the content that was to be covered, most syllabuses now encourage a more balanced approach to the subject or area of study. This has been done by specifying objectives relating to the know-

ledge required, the skills to be developed and the attitudes, values and sensitivities which should be encouraged. In some cases these statements also include the processes through which these objectives might be achieved.

Second, there has been a concern for balance in relation to actual subject offerings within the curriculum. Past curriculum offerings often meant that students, even in their early years of secondary schooling tended to specialise in 'areas' such as the sciences, the humanities, commercial studies, or the manual arts or trade fields. Today, there is a much greater range of subject choice available. As well, students can attain a more balanced education, and perhaps one more relevant to their needs, through being able to choose a combination of subjects which may extend across the sciences, the humanities and other fields.

Consideration of 'balance' also carries with it consideration of curriculum organisation. Over recent years there has been some attraction to integrated approaches and even more recently the discussion of the concept and practice of core curriculum further reflects this interest in the organisation and presentation of curriculum.

Core Curriculum

In 1980, the Curriculum Development Centre published 'Core Curriculum for Australian Schools'. Although consideration of the concept of 'core' has been going on for some time, this publication has proved to be a major stimulus to teacher educators, schools and teachers in the continuing process of reassessing the curriculum. Far from being a description of syllabus content or assessable learnings, the document sees core curriculum as consisting of those 'basic and essential learnings which can reasonably be expected of all students who pass through our schools'. It is not seen as the whole curriculum but as one part or dimension of it.

By 'basic', the Curriculum Development Centre intends learnings which form a base or foundation for other learnings (such as literacy skills or the skills of group participation); by "essential" it intends those learnings and experiences which are required by all for effective cultural, economic, political, group, family and interpersonal life in society'.

To assist schools, the Centre proposes three broad focuses of learning within and through which they are encouraged to define their core curriculum and structural learning experiences for students. These focuses are:

- a) Those learnings which occur in, and are made possible by, certain kinds of **learning environments, learning situations or experiences**. An example of this is the appreciation and knowledge of music gained through participation in the school band.
- b) Those learnings which are centred upon certain **processes** such as gathering data, interpreting and analysing it and discussing their findings with other students.
- c) Those which arise from the **structure of knowledge and understanding** such as subject areas, subjects, or forms of experience. Nine of these broad areas are defined and described:

Communication

Scientific and technological knowledge and their social applications

Mathematical skills and reasoning and their applications

Moral reasoning and action

Social, cultural and civic studies

Environmental studies

Arts and crafts

Health Education

Work, leisure and lifestyle

As can be seen, the proposed definitions, the focuses of learning and the broad areas of understanding extend far beyond factual recall, and extend even further the knowledge, skills processes, and values that students would be expected to encounter in their schooling.

One impact of this publication has been to heighten the awareness of both educators and community members to the components of a possible core curriculum. Subsequent discussion and debate have also centred around ways in which these considerations might be incorporated into planning the total curriculum for a school, a curriculum that would be a truly 'balanced curriculum'. To achieve a balanced social science curriculum, schools should look to providing their students with:

- a **range of learning environments** or situations, including different patterns of classroom organisation such as working in small groups. Other learning environments would involve the student as a participant or observer in different institutional, social or vocational settings in the community such as work experience, visiting sessions at law courts, and being involved in social surveys
- a **range of learning processes** including those which develop such skills, for example as inquiry skills (observation, the gathering of data, the interpretation and analysis of evidence, the organisation and presentation of the results of inquiry, etc.) and other skills of social interaction and participation
- a **range of knowledge** from the broad sweep of the social sciences particularly in the areas of social, cultural and civic studies; environmental studies, work, leisure and lifestyle; moral reasoning and action.

In this way, students acquire, as well as **basic and essential** learnings, those abilities to understand and participate effectively in their social environment.

'If the object were to make pupils think, rather than to make them accept certain conclusions, education would be conducted quite differently; there would be less rapidity of instruction and more discussion, more occasions when pupils are encouraged to express themselves, more attempt to make education concern itself with matters in which the pupils feel some interest. Above all, there would be an endeavour to rouse and stimulate the love of mental adventure.'

Bertrand Russell



Changes in Teaching Strategies

The 'chalk, talk and textbook' approach to teaching certainly has not disappeared, but it is only **one** of an increasing number of activities being used in the classroom. Today the curriculum is moving to a more 'student centred' approach, which does not deny the importance of subject matter in the curriculum, but, as advocated in the discussion on a balanced curriculum, places a greater emphasis on providing students with a wider range of learning activities than before.

That is to say that current teaching practice exhibits a significant increase in the diversity and quality of learning experiences available to students both inside and outside the classroom.

As well as the basic information processing skills of data gathering, interpretation and analysis, students are given the opportunity to learn through group discussion and research, interviewing, simulation, role-playing and socio-drama. 'How do students learn?' is now as important a question as 'What should be taught?'

The Use of a Wide Range of Resources

Closely allied to changes in teaching methodology is the increasing variety of resources being used by both teachers and students. Although a textbook may still be the focus in some subject areas or programs, the tendency in recent years has been towards the use of multiple resources. The increased provision of audio-visual hardware has enabled the frequent use of film, film strips, slides, audio and video tapes in the classroom. As well, the increased emphasis on student inquiry has seen the introduction of class sets of

books, greatly increased use of libraries and has firmly cemented the place of newspapers, periodicals, pamphlets and other media as typical sources of data.

These moves have also been supported by the development of new and diverse curriculum materials by commercial publishers, government agencies and Departments of Education. For example, the large number of materials produced by the Social Education Materials Project (SEMP) provides teachers with a wide range of contemporary Australian data as well as vehicles for the development of student skills, attitudes and values. Similarly, such resource kits as 'Investigating the National Estate', 'Electing Australia's Federal Parliament', 'Children of Asia' and '17 Australian Families', all recently published by the Curriculum Development Centre can greatly assist social science teachers to promote student centred activities both within and outside the classroom.

Accompanying this growth in resource development and usage, there has been the recognition of the value of the community as a resource. As well as bringing the community into the school through the media and guest speakers, teachers and students are using the community as a data source through field excursions, social surveys and visits to social, cultural and economic sites.

Changes in the Nature of Student Assessment

With major changes taking place in the curriculum and the increase in the diversity and range of student learning experiences, there has been a concern for the adequacy of the existing means of monitoring and evaluating student performance. In a number of States, external examinations have been replaced by school based assessment, often cumulative, and linked more closely to individual school programs. This has placed an even greater responsibility

upon teachers to construct valid and reliable assessment instruments appropriate to their students and the program objectives. Fortunately, the amount of assistance available to teachers in this area is growing. For instance, considerable guidance and practical help is offered to teachers of the social sciences through two national publications: **Evaluation In The Social Sciences For Secondary Schools** and **The Social Science Item Bank**. Both are readily available to schools and provide a sound basis for the development of a school evaluation program.

Summing up these Changes

The above changes have by no means occurred in isolation or on an *ad hoc* basis. Rather they reflect educational research, both in Australia and overseas, responses to economic and social trends, an increasing awareness of community concern for education, and rapid advances in knowledge and technology.

In a quest to provide the most appropriate education to meet the needs of society the workplace, as well as the needs of the individual, social science education as with other areas of the curriculum has undergone a transformation. It is against this background of changing patterns in education that the teaching of social science skills must be considered.

The notion of 'balance' in the curriculum has been central to the discussion so far in this booklet, and before we embark on a deeper exploration of the issues involved in the teaching of social science skills, it is of utmost importance that the teaching of skills is firmly placed within the broader context of the social science curriculum. The question of skill development must be considered in relation to such factors as the aims of the social sciences, the factual content of the social sciences, and the attitudes and values inherent in them.

The Social Sciences and the Curriculum

Statements of the aims of education of the various Australian States show general agreement. A major goal of education is to assist individuals in their growth as active, informed thinking participants of society. For this goal to be achieved it is paramount that individuals develop an understanding of the social and natural world and their place in it. As well, they should acquire the skills, attitudes and values required to participate effectively in society.

Many subject areas of the school curriculum help students develop understandings, skills and attitudes that contribute to the student's 'social education'. However, as the concern for 'balance' and 'core' illustrates, there is a growing recognition that one strand of the curriculum should be concerned with the objective study of society and the environment. **This social education strand would have its knowledge, skills and values based firmly in the social sciences.**

One way of viewing the contribution of the social sciences to the aims of education is illustrated in the diagram on the next page:

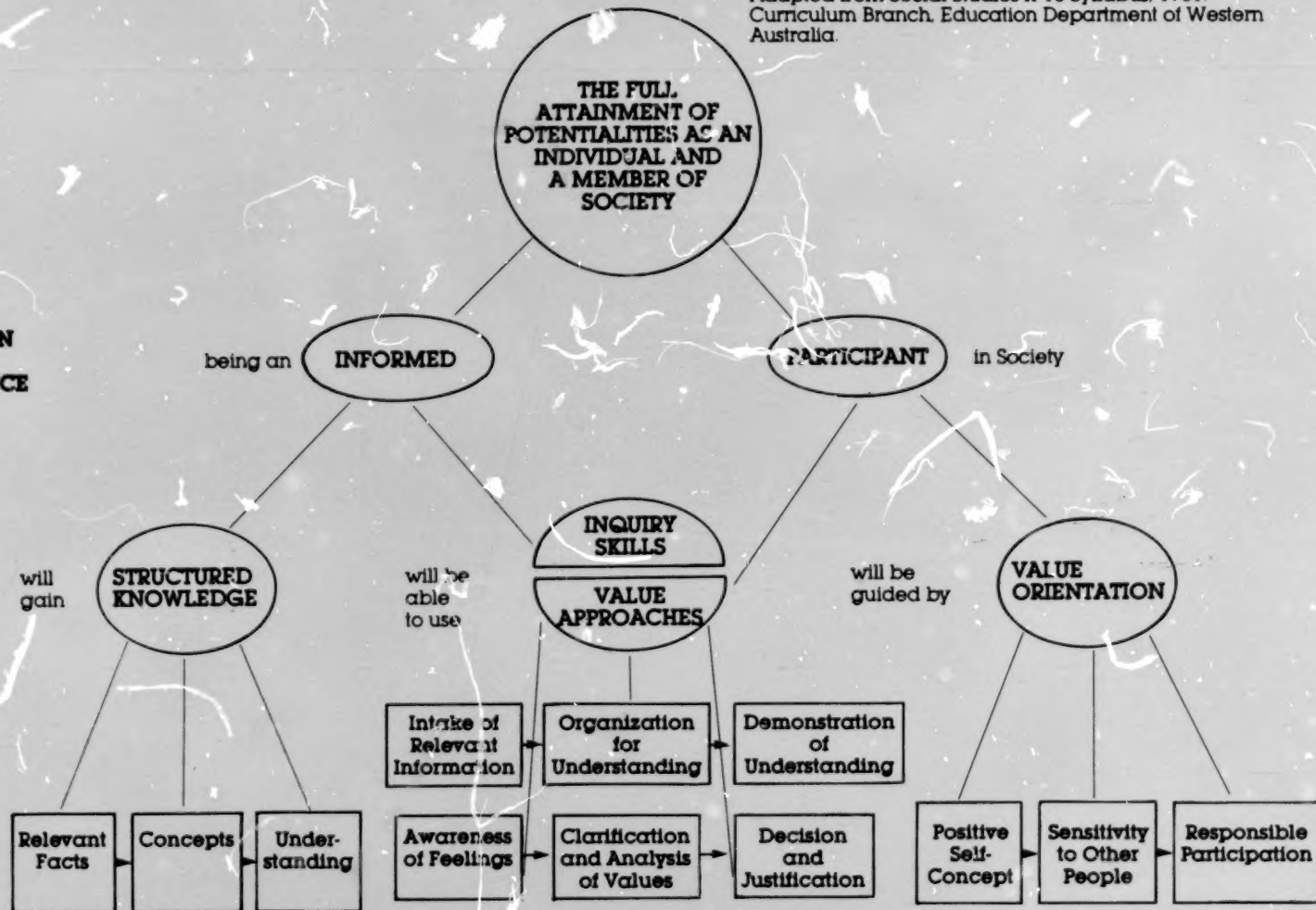
Adapted from Social Studies K-10 Syllabus, 1981.
Curriculum Branch, Education Department of Western
Australia.

**AIM OF
EDUCATION**

**CONTRIBUTION
OF
SOCIAL SCIENCE**

**AIMS OF
SOCIAL
SCIENCE**

**OBJECTIVES
OF SOCIAL
SCIENCE**



'...the social studies are centrally concerned with the education of citizens. The mark of a good citizen is the quality of decisions which he reaches on public and private matters of social concern.'

S. Engle



What are the Social Sciences?

The meaning of this term quite often varies according to the context in which it is used, and confusion has sometimes arisen as to the difference between social sciences and 'social studies'. As Marsh and Print¹ have observed these terms 'seem to have been used quite loosely and interchangeably by the various state education systems'.

Both the social sciences and the social studies deal with man in society. They are concerned with the relationships of human beings to one another, and to their environment. To explore in detail the somewhat blurred distinction between the two forms is beyond the scope of this booklet. However in broad terms the difference between the two lies in the degree to which the subject draws upon the academic disciplines for its content and modes of inquiry as compared to the degree to which it emphasises everyday 'functional' knowledge and methods, as well as developing acceptable social behaviour. In this sense, both forms contribute to the social education of the student, albeit with varying emphases and approaches, and as Piper found, regardless of the course title, throughout Australia these courses share a common concern for skill development.

The Nature of Current Social Science Education

While social education courses throughout Australia may differ in emphasis in terms of specific aims, content and skills, they do share a number of fundamental elements. These elements are:

- The **aims** of social science education
- The **perspective** from which the social science curriculum maker views the world
- The **areas of knowledge** (content) of the social sciences
- The **skills** of the social sciences
- The **attitudes and values** associated with the social sciences.

To explore briefly these elements not only illuminates further the nature of social science curriculum, but also places the principles of skill development in its curriculum context.

AIMS AND PERSPECTIVES

In broad terms the fundamental aim of education is to transmit the culture to the young, and to introduce them into the society of the time. Social science courses in secondary schools have an important role to play in this process, and different social science courses attempt to contribute to the achievement of these aims in different ways, depending on their focus. Examples of this variation in focus are outlined below:

- **The academic disciplines from which most school social science courses are derived provides one focus.**

The social science disciplines differ from each other in a number of ways. As well as concerning itself with a separate and distinct area of knowledge, each discipline differs from the others in the way observations are made, and in the way data or evidence is collected, organised, and processed. More importantly, each discipline has its own fundamental questions to be addressed, and a set of ideas or concepts which form the body of knowledge of that particular discipline.

Traditionally, the only 'social' disciplines represented in the school curriculum were history and geography. Economics has been introduced into the later years of secondary schooling, and now such newcomers as anthropology, sociology, and psychology are appearing in a variety of forms in secondary school courses.

- **A second focus arises because courses may differ according to whether it is believed that the students should receive the culture as is, by way of textbook and lecture, or discover culture through exploration and reflection.**
- **Other differences in focus include the degree to which a course requires its students to collect systematically and analyse data.** Some courses aim at students developing an understanding of phenomena through

observation, description and reflection. Other courses may have a much more experimental approach, requiring students to form hypotheses, collect and analyse data, with a view to testing the validity of those hypotheses.

- **The last difference in focus is on whether the course claims to be directly concerned with assisting students fit into their society, or whether the course has a more general, academic purpose.**

SOCIAL PARTICIPATION

In the past, the practice of many social science programs provided very little for active and systematic participation as individuals or as a group in society. Schooling has been viewed as a preparation for social participants later on and not as the active participation of students in society in their own way.

From the point of view of a balanced curriculum which includes a range of learning environments, processes, and areas of knowledge, it is not difficult to perceive an emphasis throughout this booklet on **active student involvement**. This involvement could take such forms as: observing, information seeking, field trips, meetings, interviews, social surveys and community services. Above all, students are actively involved in society *per se*. They are members of society, and participate in one way or another. They are a target group for commercial interests; they participate in the market place. They are bombarded by a mass of conflicting values and information through the media. As such active involvement could also include contribution to the public discussion of issues via the press or the electronic media. It may involve decisions to buy or not buy, to act in one way and not another.

CONTENT, SKILLS, AND VALUES

In everyday life, and in school, what we think and what we do are the result of a complex interplay of IDEAS, SKILLS, and VALUES. In planning lessons or learning activities for students, it is customary to separate these elements from one another in order to get a clearer idea of the teaching/learning process. A simple task demonstrates the complex relationship:

Calculate 20% of \$150

The following calculation involves content in the form of facts, and **concepts**, **skills** and **values**.

$$\begin{array}{l}
 \text{concept:} \\
 \text{'fractions'} \\
 \downarrow \\
 \text{Amount} = \left(\frac{20}{100} \times \frac{150}{1} \right) \text{ dollars} \\
 = \left(\frac{20}{10\cancel{0}} \times \frac{15\cancel{0}}{1} \right) \text{ dollars} \\
 = \$30
 \end{array}$$

skill:
'cancelling-out'

values 'See how neatly I have set this out
— prevents careless errors'
'This is really a useful calculation'

CONTENT

The term 'content' sometimes causes misunderstanding as to its exact meaning. Other terms often used interchangeably with it include the terms 'knowledge', 'concepts', 'facts', 'ideas', and 'generalisations'. For the purposes of this discussion, to distinguish between the curriculum elements 'content', 'skills', and 'values', the term 'content' is defined as follows:

The **CONTENT** of a curriculum is defined as the facts, concepts, generalisations, and theories which are expected to be understood and internalised by the students.

It is not so long ago that the educative process, particularly in secondary schools, was dominated by the objective of transmitting content to students so that the facts and concepts of a body of knowledge would be retained by them to be appropriately regurgitated at examination time. Now that the development of skills and appropriate positive values are receiving more emphasis in education the assimilation of a predetermined body of factual knowledge is no longer the sole determinant of the school curriculum. However, the knowledge of facts, concepts, and generalisations about the social sciences, and about the world in general still plays an important role in student learning. These facts, concepts, and generalisations form the building blocks of the thought processes, and provide the substance on which students practise their skills, and on which they build their view of the world, and hence their values system.

SKILLS

In any reading about skills or in discussions about curricula, skills are variously labelled: problem solving skills, decision-making skills, library skills, inquiry skills, group process skills, social skills, skills of critical thinking; and the list goes on, too often with the meanings and distinctions between groups remaining unclear.



A skill may be defined as the ability to do something with a degree of expertness in repeated performances. In analysing this definition, it is possible to both illuminate the nature of skills and to draw out some implications for skill development, as follows:

- a skill is an **ability**, which implies learning;
- it involves '**expertness**', which implies mastery; and
- it involves **repetition**.

First, skills are not fixed properties of an individual attributable to heredity, but are **learned**. Admittedly, a student will gain **some** knowledge and understanding by simply attending class and listening to, and seeing what goes on around. He or she will develop certain attitudes through informal association with others. Because of the nature of skills, however, an active learning process, and more importantly, a conscious teaching effort, is necessary for effective skill development.

Second, the demonstration of a skill by one who has **mastered** it can give the impression of action without

thought or concentration, and this can appear deceptively simple to a novice. Think of the number of times students are introduced to a skill through an activity demonstrated by the teacher (for example, the use of a catalogue system, or the construction of a simple graph) and then, with little further instruction, are asked to replicate the skill. What appears simple becomes complicated and difficult when attempted by the novice.

The 'mastery' of a skill is the result of a definite (and often extended) process involving the third aspect raised in the definition, that of **repetition or practice**. The 'practice' component of skill development is extremely important, and mastery of any skill is achieved only by building on routines which have been performed on repeated occasions. This is not to imply, however, that skill development should be based upon 'drill' techniques because of the association of the word 'drill' with behaviour that is mechanical in nature. Rather, the general principles of the skill can be demonstrated and used with different stimulus material on different occasions.

Although some subject areas may have skills peculiar to them, most of the skills which the social sciences are concerned to develop are not subject specific. Indeed skills are usually transferable across subject boundaries. There is a strong case for teachers in different subject areas to become involved in the mutual reinforcement of skill development. This is not to deny, however, the importance of **content**. Although specific content has little to do with how well skills are developed, **skills have no meaning if they are divorced from content**. As indicated earlier, skills are tools for learning. As Peter Hill points out '... it is always a good idea to ask what is the aim of learning a skill and avoid viewing skills as an end in themselves'.

As with skills and knowledge, so there is a reciprocal relationship between skills and emotions, as is shown where the increased ability to undertake tasks involving skills can lead to a sense of satisfaction and achievement. These are

surely integral to motivation and the development of positive attitudes on behalf of students towards their work. In fact one of the greatest motivators, one of the most powerful generators of admiration among human beings, is the demonstration of a superb skill in areas of human endeavour. In our society those who excel in sport, and in the arts are often almost national heroes.

ATTITUDES AND VALUES

Social science education neither can nor should evade questions of values. Value orientations are the foundations of social institutions, and the value positions of individuals and groups in society have consequences for action. No major problem, issue or concern can be considered without the exploration of their associated values.

Valuing must be considered, in part, an intellectual operation. All social science programs confront complex questions arising from conflicting attitudes and values. Thus it is neither desirable nor possible for teachers to attempt to establish a 'value free' situation in the classroom; student behaviour, teacher behaviour, subject matter, and the resource materials used are all products of value laden judgement. Students must become experienced in discerning fact from opinion, objectivity from bias. They should learn to anticipate that people living in different cultures or of different cultural backgrounds are likely to hold different values. They need to identify their own value assumptions along with those of others, to identify and evaluate possible consequences of one value stance or another. The expectation that problems can be examined in an increasingly sophisticated way can contribute to students' feeling of competence and sense of identity.

As well as the **substantive** values described above, it must be recognised that all school tasks are heavily laden with **procedural and behavioural values**.

Procedural values are the values which relate to the quality of the performance of a skill. Being coolly objective,

weighing evidence, suspending judgement, are all procedural values derived from basic scientific inquiry. These value stances stand contrary to those of being passionately involved, taking a fixed point of view, and jumping to conclusions.

Behavioural values are generally expressed as the basic ground rules for operating in the classroom setting. These would include courtesy to others, not being late and willingness to work in a group situation.



The Place and Function of Skill Development

Why Teach Skills ?

Because many people still advocate a return to the 'good old days' of education, it is important to remember that we are living in a time of rapid change. Although this has become a cliché, it is an inescapable fact, however, that human experience is accelerating. We are creating more and increasingly complex machines, generating more knowledge, developing more complex institutions, meeting more people in the course of a lifetime, seeing more of the world, and increasing our numbers at a greater rate than ever before.

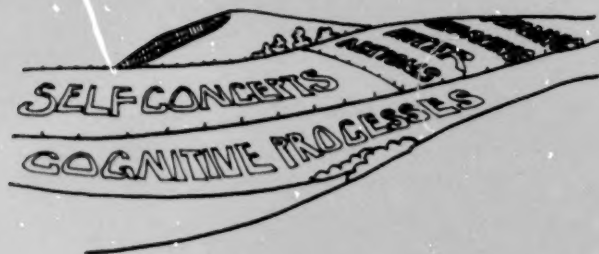
In order to function in such a world, students must be prepared for a lifetime of learning. The validity of this argument is today being felt by people in all walks of life as individuals are confronted, often very painfully, by the obsolescence of their knowledge and skills. As new technology produces new machines, workers must either learn new procedures or lose their jobs.

In order to participate as fully as possible in this increasingly complex society, people need a wider range of intellectual and social skills than ever before. For example, although public debates are held about conservation and environmental protection, many people can neither join the debate nor appreciate the arguments. They don't know the vocabulary, much less the historical, ecological, or heritage principles on which the issues rest. What is worse, quite often they don't know where or how to learn these things.

Given the need for lifelong learning, and the fact that for effective learning in the social sciences, a close inter-

relationship must exist between knowledge, skills, attitudes and values in curriculum, there are a number of other very cogent reasons for an increased awareness of the potential of skill development:

- Subject matter content cannot be taught as an end in itself. Research has shown that, even at university level, students forget about three-quarters of all the content of their courses
- Even if it were possible to gain widespread agreement as to what should constitute a significant body of factual learning, the sheer quantity to be assimilated would most certainly daunt even the most industrious and conscientious students and teachers. Even if this body of knowledge were agreed upon at a certain point in time, it would probably become outdated and irrelevant to students in only a small proportion of their life span.
- Related to this point is the emphasis on concepts, generalisations and main ideas as means by which students can organise and make factual information more meaningful. Such a process cannot occur unless students are led to develop the required skills to organise and use information.
- Further research in such fields as cognitive processes, self-concepts, and teaching-learning interactions is forcing a re-evaluation of what type of learning is possible in the classroom.
- Recent research on 'readiness' indicates the need for a re-assessment of when to teach map-reading and observation skills to younger students. Such research is changing a basic philosophy from what schools should do to students, to what schools should do for students. More emphasis is being placed on learning experiences to give students the appropriate background, rather than waiting for students to 'become ready' to learn.



'People do not live by information. The information is needed, but without the skills to act on the information, the person is crippled. The power lies not so much in the information as in the skills to organise and use it, to make meaning of it.'

H.P. Cole

- Many of the newer curriculum materials and resource kits now being developed and published place greater demands on student skill development than ever before and yet, in many cases, assume that students have already mastered such skills as critical reading, group discussion, using statistical evidence and interpreting primary source documents. Unfortunately, this is often not the case.
- Schools today are undergoing increasing pressure for 'accountability', and in some cases, a return to the 'basics'. For the advocates of this point of view social science education would fulfil its purpose if it provided students with the required knowledge and a modicum of rudimentary information gathering skills. However, learning **only** easily testable fact finding skills will prove increasingly inadequate for life in the modern world. Other factors, such as higher level thinking processes, useful knowledge, and clear values, are needed for

students to function effectively. Clearly the purpose of social science is greater than helping students attain minimal skills. If attention is not focussed on a much wider, more compelling purpose for teaching the social sciences, more and more teacher time will be spent helping just a few more students achieve minimum academic skills levels.

Despite the validity of this argument, as Peter Hills points out, we must beware of making unrealistic claims concerning the value of skills. Skills alone (as with knowledge alone) cannot ensure immunity against the effects of change. Although a strong case may be considered to exist for an increased emphasis on the teaching of skills, any focus on skills to the exclusion of knowledge and attitudes is an unrealistic approach to the learning situation.

What Skills Should Be Learned?

There are a number of ways in which skills may be classified and described. McCracken-Carpenter (1953), Piper (1976), Hill (1976) and Connell (1981) have proposed various means of categorising the skills of the social sciences. A categorisation which reflects the thinking of these writers has been adopted to provide practical guidelines for the teaching of skills in the social sciences:

- Skills of inquiry
- Skills of expression and communications
- Skills of social participation.

'Inquiry' is used in this booklet to refer to the process of 'finding out', of gathering information, of interpreting and analysing data, in order to provide a basis for arriving at possible conclusions.

It is indicative of the nature of social science curriculum in Australia today that inquiry skill development is central to social science courses throughout the country.

The skills of inquiry range from such simple tasks as locating a book, identifying symbols on a map, or listening to a news bulletin, to the more complex activities such as detecting bias in a written passage, analysing a situation for possible cause-effect relationship, or developing a research hypothesis.

On the next page is a categorisation of skill areas which illustrates the nature of inquiry processes. It is not suggested that these skill areas form an invariant logical sequence. However, the skills do increase in complexity from basic thinking skills to those of reflective and constructive thinking.

'Facts don't speak for themselves. They must be worked over and in a sense created into meaning. Skills are seen as tools which assist one to do the working over and creating.'

J1 Mallan and R. Hersh



SKILLS OF INQUIRY**LEVEL OF ACTIVITY****BASIC INTELLECTUAL
SKILLS**

Finding an appropriate
authoritative source

- Selecting the appropriate source of information:
encyclopedia, atlas, almanac, reference or text book,
newspapers, magazines, radio.

- Finding the required information:
Use of index, table of contents, radio or TV guide, atlas co-
ordinates, etc.

Extracting information
from sources

- Extracting a single piece of information from source:
verifying the date of an event, locating a town on a map,
reading tables and graphs, identifying features on
diagrams, identifying the main idea in a paragraph.

Direct observation

- Identifying what elements to record (e.g. the number of
trucks and semi-trailers, but not buses, that turn left at the
intersection).
- Recording systematically and accurately (e.g. setting up the
appropriate recording sheets).

**SKILLS OF
REFLECTING
THINKING**

Analysis of evidence and
assessment of probabilities

- Interpreting the meaning of a single piece of datum i.e. by
restating it in a different way (e.g. in 1976 the single rate
pension was \$41).

- Analysing the relationship between data about an event
from different sources (e.g. in 1976 the single rate pension
was 23% of average weekly earnings).

- Explaining probable cause and effect relationships.

Classifying and generalising

- Grouping relationships under general headings (e.g. 'given
the information about consumer spending of this group of
people, it appears that the major causes of economic crisis
were ...').

SKILLS OF
CONSTRUCTING
THINKING

Clarifying a research
problem

Framing researchable
questions

- Identifying the key element or concepts in the area of interest (e.g. what might be the major factors influencing sales of iceblocks at the school tuckshop?)
 - Postulating the possible existence of relationships between elements (e.g. sales of iceblocks are higher after paydays).
 - Organising possible relationships into a series of testable questions (e.g. what degree of influence has the weather on iceblock sales? What is the effect of advertising in the school?)
 - Forming a series of testable hypotheses (e.g. during wet weather iceblock sales will be reduced; a school advertising campaign will increase iceblock sales).
 - Testing hypotheses:
Constructing a valid and reliable research design i.e. determining what data is to be collected and how it would be collected and analysed (e.g. iceblock sales figures).
Collecting and analysing data (e.g. examining relationships between iceblock sales figures and weather, or time elapsed since payday or number and placement of advertisements).
 - Evaluating hypotheses in the light of analysed data (e.g. Iceblock sales are greatest after paydays, and will increase for a short time after an advertising campaign).
-

Data processing skills are critical to students' abilities to work with sources of knowledge. They include competence to locate and compile information, to present and interpret data, and to organise and assess source material. However, higher levels of skill development using the tools of the social scientist, such as identifying hypotheses, making inferences and reading critically, cannot be attained unless they are part of a coordinated program extending through all year levels. This point will be returned to in discussion following, but it cannot be overstressed that if provision is not made at all year levels for the sequential development and continuous reinforcement of these skills, growth will be stunted at an early level.

Intellectual skills, the various processes of thinking, have recently received increased emphasis in social science curricula. Lower level intellectual operations such as memorisation often characterise student assignments, questions and examinations. Less attention has been given to the more complex cognitive processes such as analysing, synthesising and evaluating. Approaches geared towards inquiry, which represent one effort to alleviate this situation, have received considerable attention in current literature and curriculum development, but extensive practice and support seem to be slow in coming.

Thinking skills serve several functions. First, they provide the prime path to acquiring knowledge. They also permit the individual to make use of knowledge by asking significant questions; they permit analysis of conflicts and differing points of view; they enhance decision-making power; they support efforts to form and clarify values. Such intellectual skills are of paramount importance in investigating social issues, and well-developed thinking skills are a vital link between knowledge and social participation.



SKILLS OF EXPRESSION AND COMMUNICATION

The ability to express ideas and/or emotions clearly and effectively is a complex of skills distinct from those of inquiry. They involve the organisation and sequencing of ideas; of translating those ideas into an appropriate form using an appropriate medium; of developing skill in using a variety of forms. The student booklet **Presenting Information** takes up many of the challenges presented here.

CREATIVE EXPRESSION

In general, students will respond to the tasks of inquiry in a fairly predictable way which is characteristically logical and intellectual: they will gather data, interpret and analyse them, and present their findings in one or more of the data forms set out on the left hand side of the **Planning Grid** on page 38.

It must be remembered, however, that there are other more expressive and artistic forms of response which are equally legitimate. Forms of creative and expressive response should also be encouraged, and sometimes demanded of the student. Such spontaneous and individualistic presentation of thoughts and feelings in the form of picture, poem, music, dance, mime and drama are often a more realistic and immediate communication of an idea than a thousand words.

SKILLS OF SOCIAL PARTICIPATION

Another integral part distinct of the skills element is that relating to **social skills**. Effective interpersonal relations seem to depend on a sensitivity to the needs and interests of others, adequately developed communication skills and the ability to identify and deal with conflict and authority. Both within and outside the classroom, students should have abundant opportunities to work out social relationships at the face-to-face level.

Skills are not developed as a result of accumulating information, isolated 'skills' lessons, or just good luck. Rather, they are acquired through real opportunities for constant practice and use, systematically planned by curriculum developers and teachers. Equally important, however, is the recognition of skills as the critical link between knowledge, valuing and social participation.

The basic social skills may be categorised as follows:

- 1 Learning how to relate to and communicate with others
 - To identify possible consequences of one's words and actions on others
 - To show concern and courtesy for others.
 - To react with sensitivity to individual and cultural differences
 - To understand that effective communication requires the individual to make considerable personal effort to understand others
 - To listen to others
 - To speak with accuracy and purpose
 - To identify different social situations and match behaviour
- 2 Learning how to work with others
 - To understand that some situations require co-operation
 - To share tasks and work constructively with others.
 - To recognise that working with others requires contributions from all
 - To recognise that others can be used as a valuable source of information
 - To function as an effective member of a group.

(This listing taken from **Social Studies K-10 Syllabus**, Education Department of W.A.)

SKILLS PROGRESSIONS: THE GROWTH OF COMPLEX SKILLS

Generally, the skills of social science education are quite complex, for they have both cognitive and affective dimensions, and are built up in a complex of simpler component elements. For instance, the repertory of reading skills possessed by a year 10 student involves many different skills related to the reading process. These include word recognition, reading short sentences, skimming for main ideas or interpreting a written passage to detect bias.

These skills have been built since the beginning of schooling, as a more complex skill is built upon the preceding foundation of simpler skills. This progression of skill development may be extended with further reading tasks which demand variation of those skills already mastered, and as well, the development of further skills which are even more complex. An example of this progression of the reading skills mentioned above would be comparing different written passages to analyse whether any bias detected is of a similar nature.

Hence to assist students to develop more complex skills the teacher must be aware of the necessary progression of skill development from the simple to the complex. The important point to emphasise here is that the focus should be on the **process of the student developing new skills** by moving through the progression, and not on teasing out a complex hierarchy (or organisational chart) of skills which all students would be required to master in a one-step-at-a-time, little-by-little, sequence of learning activities. The basic issue is whether the teacher believes the students are human beings who would expect to act in a characteristically human way or whether the teacher sees each student as minicomputers requiring to be programmed at each step. This distinction has very strong implications for the teaching of skills and will be dealt with in further detail in the section **Skill Development in the Classroom**.

The progressive and cumulative nature of skill development also reinforces the concept that skills should not be seen as an end in themselves. They should be meaningful to students who should understand why and how the skill can be employed. This is best achieved if the skill is taught in its **functional context**. For instance, in teaching reference skills to students and dealing with such aspects as the card catalogue, the Dewey system, library procedures and the use of indexes and guides, it is only common sense that such an exercise would be carried out in the library or where students can have on-the-spot practice using those skills.

In this sense, skill instruction should take place within the framework of the topic or subject being studied, such that the student's attention is called to the need for that skill. That is, the skill must be learnt if the problem confronting the student is to be solved. For example, the individual will not develop reference skills if he or she always uses the same reference. Nor will he or she develop map reading skills if only one type of map is used.

Skill Development in the Classroom

To increase the emphasis on skill development is not to deny the importance of the other elements of the curriculum in particular. They are highly interrelated, but although they are interrelated, they are not necessarily presented, taught or learned in the same way. Teaching procedures which are appropriate in presenting information, or developing attitudes, are not necessarily appropriate for the teaching of skills.

A number of implications for teaching have emerged from the previous discussion of the nature of skills themselves. Perhaps one of the most important implications to emerge is that a genuine attempt at improving skill development can be made only if consideration is given to a co-ordinated and sequenced program throughout a school. This necessitates both vertical co-ordination, that is the sequencing of skills throughout the year levels (ideally from 1 to 12) and horizontal co-ordination, across each year level and subject area, such that skills can be reinforced and applied to different content in different learning situations.

To provide guidelines for both curriculum planning on a school basis and also planning for individual teacher programs, a number of general principles for skill development apply. However, as Hill notes, 'while the learning of skills can be facilitated through the provision of systematic instruction, whether in fact improved skills learning does occur depends upon the quality of instruction given'.



Principles for Skill Development

The following principles, from the 24th Yearbook of the National Council for the Social Studies, provide concise, yet comprehensive guidelines for skill development and are supported by the more recent research of Hill.

- 1 The skill should be taught functionally, in the context of a topic of study, rather than as a separate exercise.
- 2 Learners must understand the meaning and purpose of the skill, and have motivation for developing it.
- 3 Learners should be given a good model to imitate and be carefully supervised in their first attempts to apply the skill, so that they form correct habits from the beginning.
- 4 Learners need repeated opportunities to practice the skill, with immediate feedback so that they know where they have succeeded or failed in their performance.
- 5 Learners need individual help, through diagnostic measures and follow-up exercises, since not all members of any group learn at exactly the same rate or retain equal amounts of what they have learned.
- 6 Skill instruction should be presented at increasing levels of difficulty, moving from the simple to the more complex, the resulting growth in skills should be cumulative as the learner moves through school, with each level of instruction building on and reinforcing what has been taught previously.
- 7 Students should be helped, at each stage, to generalise the skills, by applying them in many and varied situations; in this way, maximum transfer of learning can be achieved.
- 8 The program of instruction should be sufficiently flexible to allow skills to be taught as they are needed by the learner; many skills should be developed concurrently.

By using these generalisations as a basis it is possible to suggest some more specific guidelines and a framework within which skill development could be pursued in the classroom.

As with any sequence, rigid adherence places the teacher in a dominant role and this in turn may stifle the creative impulses of students. They are guidelines only, but do illustrate how the general principles of skill development can be translated into tasks for both teacher and student.

It should be remembered that as in all teaching situations, some students will be more advanced in their readiness to undertake certain tasks than others. In such cases, a simple pre-test can indicate any significant variation in ability levels which might necessitate changes in approach.

Approaches for Developing Students Social Science Skills

PRINCIPLE

Identify and clarify the skill to be learned.

Analyse the skill by breaking it down into its major components.

Observing and initiating a model helps initial learning of the skill.

Verbalising a set of instructions helps the early phase of skill learning.

Practice under desirable conditions helps learning of skills by eliminating error.

Obtaining feedback helps skill learning through a knowledge of results.

Evaluating one's performance makes continued improvement possible.

METHOD

Identify and analyse the skill in terms of its components

- Are **all** students capable of dealing with the skill? Is any component causing or likely to cause trouble? Have they undertaken it before? Should a simpler variation of the skill be undertaken first?
- Is the skill meaningful to the students? Should its value be explained in its functional context?

Demonstrate the correct actions and response.

- Can students understand the various steps involved? Is it clear that they know what to do?

Guide first responses verbally and physically.

- Are all students correctly following the model as demonstrated? Is there a need to further explain a particular step as they proceed? Do we need a flow chart?

Arrange opportunities for students to practice the skill.

- Are **all** students familiar with the process?
- Have students who have mastered the skill the opportunity to use it in a varied context or with other material?

Provide feedback and correct errors. One method is by providing a commentary as the skill is being performed.

- Do the students know how successful they are? Have they attained the highest level of performance that their potential will permit?
- Have the students been provided with **positive** feedback about what they **should** do as well as negative feedback telling them what **not** to do?

Encourage students to make self evaluation.

- Do students recognise their level of performance in relation to what is desirable?
- Are the students **satisfied** with their own level of performance?

Categories of Skills

While it is a relatively easy matter to accept that there is a strong case for emphasising the systematic development of specific skills, it is very difficult to decide what those skills are. The research of Peter Hill indicates that there is very little agreement among educators about which skills should be taught, and about which skills are able to be taught to a given student or group of students at a particular stage. What is agreed upon, however, is the need to provide teachers with assistance, and a number of useful skill classifications are included in Hill's text.

The categories on the following pages are a further attempt to generate an awareness of the various types of skills which can be developed through social science programs. At a glance it is obvious that many of these skills **cannot**, and should not, be considered the sole prerogative of the social sciences, but in most cases comprise skills which are not only necessary for effective learning in school, but which also contribute to the individual's effective functioning in society.

The listing of skill areas and relevant sub-skills is by no means exhaustive or definitive, and should certainly not be considered as a check-list either for teaching purposes or program planning. These points merit further elaboration.

First, upon examination, it is evident that the 'skill areas' are not discrete and that there is a very strong relationship, even overlap between many of them. For instance, data gathering, in most cases, involves reading skills, whilst recording skills are very closely linked to those of listening and observing.

Second, nearly all 'skills' can be broken down for purposes of understanding, discussion or tuition, into a complex or series of components. Again, the point must be raised that any discussion should centre on the **process of skill development by the student** and not on the exercise of **seeing how many discrete parts** it is possible to break any skill into.

A brief example may serve to illustrate. Making a good



cup of tea is a skill with an emphasis on cognitive rather than motor skills. The key issues relate to water temperature, the correct sequence of actions, the appropriate proportions of ingredients, the selection of high quality ingredients. If a step-by-step flow-chart of the process is the basis of teaching, then the whole skill and the reason for teaching it becomes trivialised and there is a strong possibility that the **key issues** become lost in a sequence of detail. However, given that some care must be taken to avoid trivialising the whole

exercise, it is necessary for the teacher to have some knowledge of the key components of the skill. For instance, the skill of interpreting photographs could involve understanding the concepts of foreground, middle distance and background, as well as skills of line-sketching and using a scale.

It is in this sense that the skills can be considered incomplete, and should not be considered as 'basic', 'core' or 'essential' in any way. Rather the listing is intended to raise an awareness of the various skills areas which contribute to learning and to provide a stimulus for thinking about provisions for skill development in particular programs. Indeed, the selection of skills and the emphasis placed upon them will very much depend on the needs of specific school programs and the needs and abilities of the students undertaking those programs.

HOW MIGHT THE LISTING BE USED?

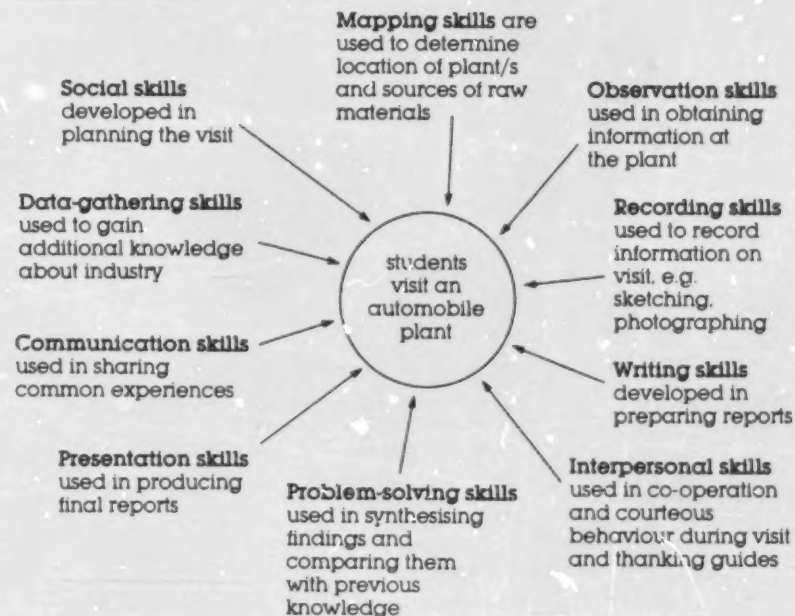
As outlined above, the initial value of the listing lies in providing a basis for ensuring that a balanced approach can be achieved in any program. The listing could also act as a stimulus to identifying areas of a program which might provide opportunities for skill development.

Secondly, as a major principle of skill development in that skills should not be treated in isolation and cannot be divorced from content, the listing provides a useful tool in the development of learning experiences for teaching programs. Once particular skills (or groups of skills) have been identified from the listing, specific content can be examined to determine how best it can act as a vehicle for development, i.e. which activities would enable students to develop concepts, generalisations or mastery of factual information whilst at the same time developing the relevant skills. For example, in teaching the topic 'population of Australia', student tasks could involve reading and interpreting statistical tables and graphs relating to aspects of population and drawing conclusions from them.

In this way specific content can be treated through the vehicle of skill development. Similarly, should a major objective in social mathematics be to develop the skill of calculating percentages, a relevant content vehicle could be the concept of interest rates and how this relates to credit, savings or housing loans.

In both these instances several objectives, whether they be skill or content or process/thinking skills, can be met in a carefully thought-out learning experience.

Thirdly, pursuing a similar theme to that above, a number of skill areas and specific skills can be treated through a well-planned activity. An example of this is illustrated by a class visit to a factory.



INQUIRY SKILLS

BASIC INFORMATION GATHERING AND DATA PROCESSING SKILLS

Finding appropriate sources of information

- Locating sources: artifacts, graphs, books, maps, charts, tables, documents, films, newspapers, music, photographs, street directories, telephone and television
- Using catalogues effectively

Working with books, newspapers and magazines

- Recognising when a book is out of date
- Using map lists, figures, diagrams
- Locating information in reference texts by using key words, letters on volumes, index and cross references
- Making efficient use of a dictionary
- Using archives and archival material
- Identifying sections of newspapers and magazines

Working with film and video

- Distinguishing between documentary and entertainment programs
- Identifying different segments of a film or video program
- Listening and observing with purpose

Extracting information from sources

- Skimming to find a particular word, obtaining a general impression through scanning or locating specific information

Reading

- Reading to find the answers to questions
- Making use of headings, topic sentences and summary sentences to select main ideas and differences between main ideas and subordinate ideas

Listening

- Listening and observing with purpose
- Identifying a sequence of ideas and selecting the most important
- Relating, comparing and evaluating information gained through listening and observing with that gained from other sources
- Reserving judgement until the speaker's entire presentation has been heard
- Taking notes while continuing to listen and observe

Interpreting data
in a variety
of forms

Diagrammatic

Visual

- Reading and interpreting charts, tables, graphs, statistics
- Examining and interpreting photographs, pictures, cartoons and drawings
- Obtaining relevant data from film, filmstrips, slides, transparencies, videotapes
- Comparing information about a topic drawn from two or more sources

Quantitative

- Undertaking simple calculations involving addition, subtraction, multiplication and division.

Temporal

- Calculating time
- Arranging events chronologically
- Identifying cause and effect relationships

Spatial

- Orienting a map, noting direction
- Recognising the scale of a map
- Using a scale to compute distances
- Identifying and locating natural and cultural features on a map
- Locating places on a map by using a grid system
- Recognising and expressing relative locations
- Reading symbols, interpreting the 'language of maps'
- Drawing conclusions and making inferences from maps
- Comparing maps

Real (Direct Observations)

- Identifying purpose of field excursion or interview
- Planning procedure, rules of behaviour, questions to be asked, things to be looked for (constructing and using questionnaires)
- Establishing acceptable ways to begin and end an interview
- Sketching (line sketching, field sketching)
- Tallying, tabulating
- Classifying, categorising, coding
- Using multi-media instruments, e.g. tape recorder, camera

Thinking about the information
extracted

Analysing data and evidence
(For data in all forms)

- Selecting the main idea and supporting facts
- Recognising relationships
- Drawing inferences
- Drawing conclusions
- Relating information gained through listening and observing with that gained from other sources
- Distinguishing between fact and fiction, fact and opinion, relevant and irrelevant
- Distinguishing bias, and value judgements
- Examining reasons for contradictions and seeming contradictions in evidence
- Recognising propaganda and its purpose in a given context
- Recognising points of view as expressed in cartoons and interpreting such points of view
- Estimating the adequacy of data

Making generalisations on the basis
of evidence

- Explaining possible cause and effect relationships
- Grouping data and relationships under appropriate headings — summarising evidence
- Enunciating principles which explain a whole class of events

Undertaking research

- Asking questions and identifying problems
- Developing tentative hypotheses
- Drawing up priorities for tasks to be completed
- Drawing conclusions based on consideration of information gathered
- Testing and verifying conclusions

SKILLS OF EXPRESSION AND COMMUNICATION

PRESENTATION SKILLS

- Organising information in terms of intended audience
- Presenting written information visually and symbolically (and economically) in diagrams, maps, flow charts, time lines and graphs
- Recognising the need for conciseness, neatness
- Recognising alternative methods of presenting information

SPEAKING SKILLS

- Controlling tonal qualities of voice
- Articulating clearly
- Organising thoughts logically
- Effectively using bodily expression
- Effectively participating in group discussion
- Debating particular points of view, and defending a position on an issue

WRITING SKILLS

- Outlining, summarising, notetaking
- Using sentence, paragraph and essay as appropriate forms of expression
- Using diaries, logs or journals

SOCIAL SKILLS

INTERPERSONAL SKILLS

- Identifying possible consequences of one's words and actions on others
- Showing concern and courtesy for others
- Sharing tasks and working constructively with others
- Functioning as an effective member of a group
- Proposing appropriate ways to conduct a group activity
- Adopting a variety of group roles, e.g. leader, organiser, secretary, illustrator
- Controlling ideas and opinions in a constructive manner
- Accepting and encouraging constructive criticism
- Matching people and tasks to be completed

SOCIAL PARTICIPATION SKILLS

- Functioning as a citizen advocate
- Initiating community projects
- Participating in community projects
- Attending community meetings
- Participating in responsible demonstrations

Planning a Program

As stated earlier, effective skill development requires careful planning. Such planning should take account of both sequence through consecutive year levels as well as co-ordination across areas of study in the same year level. Ideally, it should be an integral component of the total school curriculum. Important factors which must be considered when planning a program are student ability, program objectives and available resources.

Obviously, some students may master complex skills more readily than others. There are a variety of ways in which differing ability levels may be recognised. Apart from such formal methods as pre-tests, teachers can readily ascertain the approximate ability levels of individual students in their class.

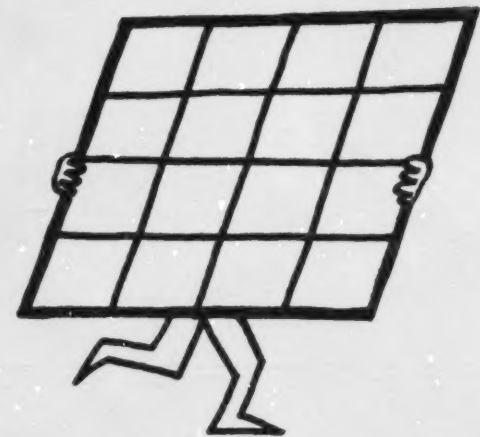
The planning grid on the next page is one approach by which a co-ordinated program of skill development may be achieved by enabling a balanced selection of activities to be made which relates the skill objectives to the various sources of data commonly encountered by students in the social science classroom.

Kevin Piper, in **Evaluation in the Social Sciences** recognises that inquiry skills not only lend themselves to sequential treatment but that students should have the opportunity of working with various forms of data. This is important not only because of the diverse range of learning experiences which can result but also because students are continually exposed to various forms and sources of information with which they have to work.

The planning grid builds upon the work of Piper and that of Gross (1974) and as Peter Hill points out has considerable advantage in that it has applications to any subject in the school curriculum. As well, the grid enables a balanced selection of activities to be made, and relates the skill objectives of any program to the various sources of data commonly encountered by students.

By noting on the grid the various skills to be developed and the specific activities designed to assist this development, teachers can readily ensure that certain areas of skills are not being neglected, which resources might be needed to support a topic or program, and at the same time, identify the skill and process objectives to be considered for assessment purposes. The grid may be used for a specific unit of work or for the program for an entire year or semester.

While this planning grid provides a framework for the planning of the skills of inquiry and presentation, it does not include all the communication skills or the range of social skills. This is not seen as a weakness, however, for the skills of creative communication and interpersonal relations are of an entirely different order.



SKILLS DATA FORMS	INPUT	PROCESSING				OUT PUT	FURTHER RESEARCH	
	Gathering and Organising Information	Interpreting Data and Information	Analysing Data and Information	Generalising	Making Value Judgements	Presenting the Findings	Identifying Problems/Issues	Generating & Testing Hypotheses
Language - Written - Spoken								
Pictures - Photographs - Slides/Film Strips - Cartoons								
Maps								
Diagrams and Flowcharts								
Graphs Tables Timelines								
Realia - Artefacts - Specimens								
Field Studies - Observation								
People - Interviews								
Movies - Videos								

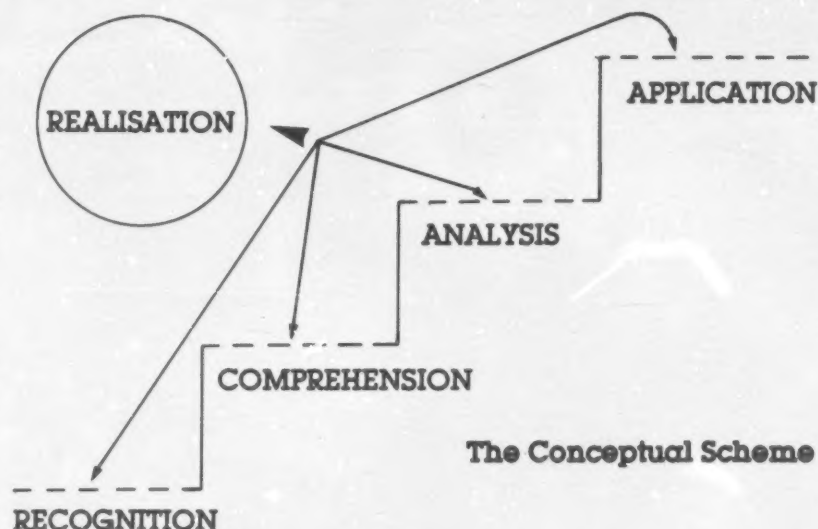
SKILLS DATA FORMS	INPUT	PROCESSING				OUT PUT	FURTHER RESEARCH	
	Gathering and Organising Information	Interpreting Data and Information	Analysing Data and Information	Generalising	Making Value Judgements	Presenting the Findings	Identifying Problems/Issues	Generating & Testing Hypotheses
Language - Written - Spoken	<i>Research of farm development in area. (Govt. documents) Identification and description of farming type.</i>					<i>Written report of case study from illustrated with sketches and photographs</i>	<i>Identification of problems facing rural production in this area. Suggestion of possible solutions</i>	<i>Examining feasibility of hypothesis through other case studies and research</i>
Pictures - Photographs - Slides/Film Strips - Cartoons	<i>Photographing farm landscape</i>	<i>Drawing and labelling line sketches of photographs</i>	<i>Comparing photographs and line drawings with field sketches</i>		<i>Explanation of relationships between land use, farming, water availability and transport networks</i>			
Maps	<i>Constructing maps to indicate: - farm layout - relationship to transport</i>		<i>Relating location of farm to regional networks of transport, land use and settlement</i>					
Diagrams and Flowcharts	<i>Identification of production and processing stages from the factory</i>					<i>Time line drawn to show the development of rural holdings in one area and transport</i>		
Graphs Tables Timelines	<i>Gathering statistics on farm production over time</i>		<i>Comparison of farm production figures with regional averages</i>	<i>Identifying trends in production</i>		<i>Constructing graphs showing trends in farm production</i>		
Realia - Artefacts - Specimens	<i>Collecting soil samples</i>	<i>Analysing soil samples</i>	<i>Relating soil types to land use recorded in field sketches</i>					
Field Studies - Observation	<i>Field sketching of farm landscape, identifying features</i>							
People - Interviews	<i>Interview with farmer and Government Primary Inspector</i>	<i>Identification of trends and problems</i>			An example for planning a unit 'FARM STUDY'			
Movies - Videos								

A Model for Developing Skills: A Case Study



This model is designed to illustrate how ideas and information presented visually, as in a cartoon, can be used in the classroom to promote skill development. Although the suggested exercises relate specifically to cartoons, the model can be easily adapted such that similar exercises can be developed using other visual materials such as slides, photographs, drawings, maps, graphs, tables and time lines. As well, by using slightly varied approaches, the model can be used with a large group, a small group, or individual instruction.

Central to this approach is the conceptual scheme consisting of five levels of operation. Underlying the structure is the belief that students will be helped to engage in various levels of rational thinking before making a value judgement or adopting a value position. As such, all levels are cognitive and the highest level, realisation, has affective components as well. This relationship is illustrated in the figure.



The various levels of the model are portrayed in the table below which provides a statement of the objective of each level. To illustrate the activities at each level and to assist in designing questions, a number of key words and question stems are provided.

Description of Level	Possible Key Words and Stems for Designing Questions	
Level 1 Recognition As defined here, the student attempts to recognise various elements in the visual, thereby building a data base for proceeding to the next levels.	count define identify list	name point record state Name all the _____ you see in the visual. Count the number of _____ you see. What is the caption of the visual?
Level 2 Comprehension Data (evidence) identified above are associated; relationships among parts begin to emerge. The student is building toward a comprehension of the visual as a whole.	associate classify compare contrast	differentiate distinguish organise relate What does A have to do with B? What is the difference between A and B? Can you compare A with B?

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Level 3

Analysis

The objective at this level is for the student to arrive at the meaning of the visual based upon the data and relationships acquired in the two preceding levels. At this level, the student should be able to create a statement of the idea presented in the visual. In general, this will be convergent thinking, since the number of possible answers is limited.

explain
formulate

interpret
summarise

Another title for this visual could be

What basic idea is found in this visual?
Explain the 'message' in this visual.

Level 4

Application

The focus of this level is to ask the student to transfer the idea or concept arrived at in Levels 2 and 3 to a new or different setting. This may be too difficult for some, depending on the concept. Therefore, it is recommended that activities on this level be one of exploring the possibilities, not one of perfecting.

adapt
apply
create
design

illustrate
plan
produce
transfer

Write, draw or tell of a situation that is similar to the one expressed in the visual.
Apply the situation in the visual to a similar event in your life.

Level 5

Realisation

After engaging in the thinking processes of Levels 1-4, the student should be able to make a value statement based on the data presented in the visual. The aim is to recognise affective issues such as value systems, ethics, and beliefs as they relate to the message in the visual.

acquire
feel

think

How do you feel about _____?
How would you put this idea into practice?
What does the message in the visual mean to you?
How do you feel about the ways other students would put the idea into practice?

SUGGESTED APPROACHES FOR USING THE MODEL

This approach to skill development moves from the simple and concrete to more complex activities: from data gathering in the stages of recognition and comprehension, to working with data, applying the ideas and concepts so gained, and finally relating those to the students' own values and attitudes. As with all skill development exercises, there is a need to monitor student progress and to provide feedback such that activities in each level logically build upon the previous level.

Depending on the circumstances, teachers may wish to vary the approach by employing strategies with whole classes, small groups or individualised instruction. The following guidelines provide suggested activities for such learning situations.



Suggested Activities for Large Group Instruction

Level 1 Recognition

Presenting the visual by a transparency, slide, or study print, the teacher should

- ask the group to state the names of items orally
- ask each pupil to write on paper the names of the items or elements in the visual
- make a composite list of group responses on the chalkboard and ask each pupil to check his or her answer list against the composite. Discuss discrepancies.

Level 2 Comprehension

Using the same visual, the teacher should

- point out two conceptually related items and discuss the relationship with the pupils
- ask the group for more examples of such relationships

Level 3 Analysis

The teacher should

- have the pupils write several short, descriptive phrases of the message in the visual and then use them as a basis for discussion. Some of these should be written on the chalkboard and discussed as to appropriateness.

Level 4
Application

The teacher might
have pupils cut pictures or cartoons illustrating similar
events from magazines and make a bulletin board
montage with the pictures
discuss ideas for application

Level 5
Realisation

The teacher could
present possibilities for value positions and engage
pupils in a discussion of the positions
ask pupils for possible value positions and discuss
possible reasons for assuming these positions.

Suggested Activities for Small Group Instruction

Small group activities may be initiated by dividing the class into groups of four to six students and working with each group separately, or the small groups may be an extension and continuation of large group activity. That is, the slide, photograph or study print may be used initially with the entire class to work through Levels 1, 2, and 3. Following this, for work at the application level students might break into groups and devise their own representations of the message contained in the visual. A student could lead the small group discussion and record answers.

Work at the realisation level, however, always requires an individualised response since the student may take a stance for or against the 'message'.

Suggested Activities for Individualised Instruction

In most cases when students are working independently, there is a need to provide structured questions and guidance to lead the student through the various levels. Once again, these questions need to be sequenced according to the objectives of each level. The following table illustrates several types of questions and exercises students may need to work through in considering a cartoon.

Level 1 Recognition

Initial Approach. Possible question is: Identify the things you see in this cartoon. These are some possibilities:

Checklist

In this cartoon, you see

- _____ four pictures
- _____ three people
- _____ a boy and a girl, Lucy
- _____ an untied shoe
- _____ Lucy sitting

Completion

There are _____ different people in the cartoon.
The boy's _____ is untied.
Lucy has a _____.

True-False

- _____ There is one boy in these pictures.
- _____ There is one girl in these pictures.
- _____ The boy's shoe is untied.
- _____ Lucy is wearing a necklace.

Level 2 Comprehension

Initial Approach. Possible question is: What action is taking place?

Follow-up approaches. These are some possibilities:

Checklist

What action is taking place?

- _____ The boy is talking out loud to himself.
- _____ The boy asks a question of Lucy.
- _____ Lucy is talking to the boy.
- _____ The boy is talking to Lucy.

Completion

The boy is talking out loud to _____.
The boy is _____ toward Lucy.
At first the boy thinks he is able to _____.

True-False

- _____ In the first two pictures the boy is talking out loud to himself.
- _____ Lucy is talking out loud to herself.
- _____ The boy is sitting.
- _____ Walking toward Lucy, the boy asks a question.
- _____ Lucy is talking to the boy.

Level 3: Analysis

Initial Approach. Possible question is: Why is this action taking place? These are some possibilities:

Checklist

What is the message?

- _____ The boy wants to be independent.
- _____ The boy is not independent.
- _____ The boy knows how to tie his shoe.
- _____ The boy discovers that he needs help.
- _____ The boy seeks help.

Completion

The boy thinks he is _____
The boy discovers he needs _____
Lucy will probably _____
The cartoonist is trying to show _____

True-False

_____ The boy wants to stand on his own two feet and be independent.
_____ The boy feels that he doesn't need anybody.
_____ Lucy is asking the boy for help.

Level 4: Application

Initial Approach. Possible question is: Describe a situation that has the same idea expressed in the cartoon. These are some possibilities:

Checklist

Another situation like this would be

_____ trying to play ping-pong by yourself and not being able to do so.
_____ never letting anyone help you.
_____ trying to see-saw without a partner and realising you can't.

Completion

Draw, tell or write about another situation that is based on the same idea; e.g. homework.

True-False

_____ Independent people never need help.
_____ Having someone help you do your homework means you are not independent.
_____ People can get along by themselves.
_____ Independence means not needing anyone.

Level 5 Realisation

Initial Approach. Possible question is: How do you feel about what is happening in the cartoon? These are some possibilities:

Checklist

For me, this cartoon means

_____ the boy doesn't need anybody
_____ although the boy thinks he's independent, he still needs help
_____ all people need other people sometimes
_____ people help other people.

Completion

All people need other _____

You can still be _____ and get help from other people.

If I were the boy I would feel _____

Obviously the level of questioning and the type of activity used will vary with the type of visual selected, the ability level of students and the amount of time available. For example, when using photographs, students may have to be introduced to the concepts of foreground, middle distance and background so that they can methodically identify and describe the features portrayed. Also in using a slide or picture, simple line sketching can assist students in recognising, comprehending and analysing the relationships between elements depicted.

SUGGESTIONS FOR THE SELECTION AND USE OF VISUALS

The following criteria can provide a basis for selecting visual material:

- The picture or photograph should **not** be cluttered with extraneous material or detail.
- It should be appropriate to the interests of the students.
- The content of the visual should be within the reach of students' experiences.
- The content should be able to generate higher levels of thinking.

Possible sources of appropriate visual material include:

- highly visual magazines such as **Geo** and **National Geographic** (photographs can be converted to slides)
- cartoons from daily newspapers
- posters from travel and advertising agencies or airlines
- commercially published sets of pictures.



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- Classroom Photography:** Learning by making photographs.
- See what I mean!** Learning through maps, charts and diagrams.
- Just imagine** Learning through mental imagery.
- Pictures of Ideas:** Learning through visual comparison and ideas.
- Midweek Matinee:** Considerations for learning from film and television.
- Lights, Camera, Action** Learning by making films and videotapes.
- Seeing and Drawing:** Learning, thinking and communicating through drawing.

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Skills Series (Other books in this series)

- Finding the Facts** (student booklet relating to data collection through use of the library, media and the local community).
- Social Survey** (student booklet relating to using survey techniques to gather data in the school and the community).
- Presenting Information** (student booklet outlining different methods for getting the message to the audience).
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